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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,019	08/25/2000	Kenneth Y. Maxham	23106/77099	4564

24587 7590 05/20/2003

ALCATEL USA  
INTELLECTUAL PROPERTY DEPARTMENT  
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EXAMINER

PAYNE, DAVID C

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 05/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/648,019

Applicant(s)

MAXHAM, KENNETH Y.

Examiner

David C. Payne

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9 is/are rejected.
- 7) ☐ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czarnocha et al. US 6,504, 630 B1 (Czarnocha) in view of Torihata US 5,267,068 (Torihata).

Re claims 1 and 7 Czarnocha disclosed,

A fiber optic communications network (Figure 6) having a transmitter (#611-612) and a receiver (#614) connected by an optical transmission line (650), the receiver having multiple output channels (614) for providing signals to terminal devices, , and a network including at least one optical amplifier having a shutdown input (616), a system for detecting a disconnect in the optical transmission line comprising (e.g., c/l: 10-15-45):

Czarnocha does disclose detecting a predetermined number of received valid signals at the ODU (2 signals, data signal and supervisory signal, e.g., c/l: 10/20-25)

Czarnocha does not disclose the demodulator as part of the power detection unit (not shown) in the ODU (e.g., c/l: 10/35-40).

Torihata disclosed a demodulator that is used to (Figure 3 #22) detect an error code of a signal. It would have been obvious to one of ordinary skill in the art at the time of invention to use the Torihata demodulator with the Czarnocha device to obtain claimed invention. One is motivated as such for the following reasons: a "valid" signal requires sufficient power in addition to recognizable information. Error code checking is a well-known method of checking for valid signal information in the presence of various transmission impairments (e.g., Torihata c/l: 3/30-60). And finally, demodulators are required to recover

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signal information at a receiver.

Re claims 2 and 8 Czarnocha disclose shutting down the operational amplifier if the data signal or supervisory signal is not sensed – hence a predetermined number of signals. (c/l: 10/20-25)

Re claims 3 and 9 Czarnocha and Torihata did not disclose means for determining a ratio of valid signals to demodulators. However it would have been obvious to one of ordinary skill in the art the time of invention to claim as such. One is motivated to conclude this since Czarnocha does disclose performing shutdown if both data and supervisory signal is missing. This constitutes a ratio of 1/1, or 2 signal / 2 demodulators. In other words, it is obvious since if the number of valid signals is less than the number of demodulators then a failure has occurred in the system. Furthermore, many WDM monitors detect the presence of signals, whether or not a ratio calculated is not patentable over detecting whether one signal has failed since a failure of one signal is a ratio of 1/n.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Czarnocha et al. US 6,504, 630 B1 (Czarnocha) in view of Torihata US 5,267,068 (Torihata) and Yamane et al. US 6,061,173 (Yamane).

A fiber optic communications network (Figure 6) having a transmitter (#611-612) and a receiver (#614) connected by an optical transmission line (650), the receiver having multiple output channels (614) for providing signals to terminal devices, , and a network including at least one optical amplifier having a shutdown input (616), a system for detecting a disconnect in the optical transmission line comprising (e.g., c/l: 10-15-45):

Czarnocha does disclose detecting a predetermined number of received valid signals at the ODU (2 signals, data signal and supervisory signal, e.g., c/l: 10/20-25)

Czarnocha does not disclose the demodulator as part of the power detection unit (not shown) in the ODU (e.g., c/l: 10/35-40). Czarnocha does not disclose a WDM receiver.

Torihata disclosed a demodulator that is used to (Figure 3 #22) detect an error code of a signal. It

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would have been obvious to one of ordinary skill in the art at the time of invention to use the Torihata demodulator with the Czarnocha device to obtain claimed invention. One is motivated as such for the following reasons: a "valid" signal requires sufficient power in addition to recognizable information. Error code checking is a well-known method of checking for valid signal information in the presence of various transmission impairments (e.g., Torihata c/l: 3/30-60). And finally, demodulators are required to recover signal information at a receiver.

Yamane et al. does disclose a WDM monitor of multiple signals (figure 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use the WDM absence detector (#13) in the receiver of Czarnocha and Torihata to obtain the claimed invention. One is motivated as such since gain tilt is introduced in transmission lines due to amplification hence the absence of a signal might go undiagnosed. Only by monitoring all channels can the receiver be assured to valid reception of the entire WDM signal. (Yamane, e.g., 2/5-20).

#### *Allowable Subject Matter*

4. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

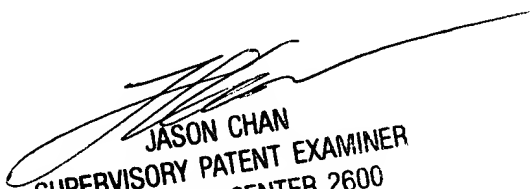
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this

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application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

dcp  
May 8, 2003



JASON CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600